



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,886	02/19/2004	Ernest Marvin Thiessen	ICANS3/WAB	9051
<div>7590 08/01/2008</div> <div>William A. Blake Jones, Tullar & Cooper, P.C. P.O. Box 2266 Eads Station Arlington, VA 22202</div>				
EXAMINER				
SKINNER, SHEWANA D				
ART UNIT		PAPER NUMBER		
4154				
MAIL DATE		DELIVERY MODE		
08/01/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/780,886

Applicant(s)

THIESSEN ET AL.

Examiner

SHEWANA SKINNER

Art Unit

4154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/19/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S509)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date ____

DETAILED ACTION

1. This is communication of a First Action Non-Final on the merits. CLAIMS 1-18, as originally filed, are currently pending and have been considered below.

Claim Objections

2. **CLAIM 8** objected to because of the following informalities: **Notation c) and d) should be a) and b) respectively**. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 15-18** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

CLAIM 15 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: what the steps are if parties "do not wish" their willingness for maximum possible corresponding satisfaction levels for other parties to be generated for and revealed to other parties.

CLAIM 16 is rejected for being dependent upon rejected base **CLAIM 15**.

Regarding **CLAIM 17**, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by

Art Unit: 4157

"or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

The phrase "repeating any of the above steps any number of times" in **CLAIMS 17 and 18** is a relative phrase which renders the claim indefinite. The phrase "repeating any of the above steps any number of times" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **CLAIMS 1-3, 6-8, 11-16** are rejected under 35 U.S.C. 102(b) as being anticipated by (*Thiessen et al, US Patent 5,495,412*) (hereinafter "*Thiessen*").

Thiessen et al discloses the following as claimed:

CLAIM 1. A computer-based method for assisting at least two parties involved in a negotiation problem
with any number of variables in achieving a mutually satisfactory agreement on

Art Unit: 4157

decisions to be

taken on one or more of said variables (*see Abstract*) comprising the steps of:

a) providing a negotiation system including at least one programmed computer system and an

associated interactive graphical interface for interactive input and output of negotiation information to and from said computer system (*see summary para 16*), said computer system being programmed to

- display said negotiation information, including packages that each represent a potential agreement on decisions to be taken on one or more of said variables of said negotiation problem in response to entered preference data from each of said parties (*see fig. 4*);
- generate at least one said package (*see summary para 16*);
- keep confidential any private information and display that information only to the party to whom that information belongs (*see detailed description para 4-5*); and
- display negotiation information that is not private, including mutually acceptable packages, only to those parties with permission to see that information (*see fig.*

4) ;

b) entering information into said negotiation system through said graphical interface, including information describing the negotiation variables, their relationship to each other,

Art Unit: 4157

any constraints on the negotiated outcomes of those variables, and information pertaining

to each said party's preferences on the outcome of each of said variable (*see detailed description para. 4,10*);

c) optionally entering into said negotiation system through said graphical interface, proposals

and/or other packages (which may be declared private) (*see detailed description para 34, 47*) ;

d) in response to said entering of said information, said negotiation system using each party's

inputted information to evaluate packages by specifying a level of satisfaction according to

each party's own preferences (*see detailed description para. 33*);

e) entering into said negotiation system for one or more parties, a confidential acceptable

level of satisfaction and, for each of those parties, their willingness for maximum possible

corresponding satisfaction levels for other parties to be generated for and revealed to other

parties (*see detailed description para. 6*);

Art Unit: 4157

f) given said entered information, for each given said confidential acceptable level of satisfaction declared by said one or more parties, said negotiation system using optimization techniques to generate a fair distribution of maximum possible satisfaction levels for each other party (*see abstract*);

g) revealing said maximum possible satisfaction levels to said other parties (*see detailed description para 3*) ;

h) if and when each of all said other parties to the negotiation (or a subset, if coalitions are allowed) accept the said maximum satisfaction level revealed to that party, said negotiation

system using optimization techniques with said entered information to generate an equivalent package that would give at least as much satisfaction to each party as they have

declared acceptable (*see abstract*);

i) revealing said equivalent package to all parties concerned (*see abstract*);

j) using each party's inputted information to evaluate said equivalent package in terms of a

specified level of satisfaction according to each party's own preferences (*see detailed description para 15*); and

k) declaring as a tentative agreement among two or more parties, any package that has been

accepted by each of those parties (*see summary para 17*).

CLAIM 2. The computer-based method of claim 1, further including the step of using optimization techniques to generate an improved package that is Pareto optimal (if not already) according to said entered preferences (or changed preferences) and displaying said improved package on said one or more graphical interfaces (*see detailed description para 71*).

CLAIM 3. The computer-based method of claim 2, wherein said step of providing a negotiation system including at least one computer system and an associated interactive graphical interface further comprises:

a) providing a plurality of independent, separate computer systems and associated interactive graphical interfaces, one each for each of said parties, each said independent, separate computer system being programmed to receive and process information from each party, including that pertaining to each of said party's preferences on the outcome of each said variable involved in said conflict (*see detailed description para 2*); and,

b) providing a central computer system located at a neutral site and a plurality of communication links connecting each of said independent, separate computer systems to said central computer system, said central computer system being programmed to receive preference information from each of said independent, separate computer systems,

generate at least one package representing a potential solution to the negotiation problem

in response to entered preference information from each of said independent, separate computer systems, and securely transmit generated information and other information to be communicated between parties;

wherein, the information pertaining to each of said party's preferences remains confidential to each party (*see summary para 22*).

CLAIM 6. A computer-based method for assisting at least two parties involved in a negotiation problem with any number of variables in achieving a mutually satisfactory agreement on decisions to be taken on one or more of said variables comprising the steps of:

a) providing a negotiation system including at least one programmed computer system and an associated interactive graphical interface for interactive input and output of negotiation information to and from said computer system, said computer system being programmed to

- display said negotiation information, including packages that each represent a potential agreement on decisions to be taken on one or more of said variables of said negotiation problem in response to entered preference data from each of said parties (*see fig 4*) ;
- generate at least one said package (*see summary para 17*);

Art Unit: 4157

- keep confidential any private information and display that information only to the party to whom that information belongs (*see detailed description para 4-5*); and
 - display negotiation information that is not private, including mutually acceptable packages, only to those parties with permission to see that information (*see fig. 4*);
- b) entering information into said negotiation system through said graphical interface, including information describing the negotiation variables, their relationship to each other,
- any constraints on the negotiated outcomes of those variables, and information pertaining
- to each said party's preferences on the outcome of each of said variable (*see detailed description para 4,10*);
- c) optionally entering into said negotiation system through said graphical interface, proposals
- and/or other packages (which may be declared private) (*see detailed description para 34 and 47*);
- d) in response to said entering of said information, said negotiation system using each party's
- inputted information to evaluate packages by specifying a level of satisfaction according

Art Unit: 4157

to

each party's own preferences (*see abstract*);

e) entering into said negotiation system for one or more parties, a confidential acceptable

level of satisfaction (*see detailed description para 6*);

f) said negotiation system attempting to generate an equivalent package that would give at

least as much satisfaction to all parties (or a subset, if coalitions are allowed) as they have

declared acceptable and if not successful then requiring one or more parties to reduce their

declared minimum level of satisfaction, each time attempting again to generate said equivalent package until successful (*see abstract and detailed description para 35*);

g) when successful in said attempt, then revealing said equivalent package to all parties concerned (*see abstract*);

h) using each party's inputted information to evaluate said equivalent package in terms of a

specified level of satisfaction according to each party's own preferences(*see detailed description para 15*); and

Art Unit: 4157

i) declaring as a tentative agreement among two or more parties, any package that has been

accepted by each of those parties(*see summary para 17*).

CLAIM 7. The computer-based method of claim 6, further including the step of using optimization techniques to generate an improved package that is Pareto optimal (if not already) according to said entered preferences (or changed preferences) and displaying said improved package on said one or more graphical interfaces (*detailed description para 71*).

CLAIM 8. The computer-based method of claim 7, wherein said step of providing a negotiation system including at least one computer system and an associated interactive graphical interface further comprises:

c) providing a plurality of independent, separate computer systems and associated interactive graphical interfaces, one each for each of said parties, each said independent, separate computer system being programmed to receive and process information from each party,

including that pertaining to each of said party's preferences on the outcome of each said variable involved in said conflict (*see detailed description para 2*); and

Art Unit: 4157

d) providing a central computer system located at a neutral site and a plurality of communication links connecting each of said independent, separate computer systems to

said central computer system, said central computer system being programmed to receive

preference information from each of said independent, separate computer systems, generate at least one package representing a potential solution to the negotiation problem

in response to entered preference information from each of said independent, separate computer systems, and securely transmit generated information and other information to be

communicated between parties;

wherein, the information pertaining to each of said party's preferences remains confidential to each party (*see summary para 3*).

CLAIM 11. A computer-based apparatus for assisting at least two parties involved in a negotiation problem with any number of variables in achieving a mutually satisfactory agreement on decisions to be taken on one or more of said variables, comprising:

a) a plurality of independent, separate computer systems, one for each of said parties, each

said computer system being programmed to receive and process communication between

Art Unit: 4157

parties and/or other information pertaining to each said party's preferences on the outcome

of each variable involved in said negotiation problem, including proposals and confidential

acceptance of any package (*see detailed description para 2*);

b) a plurality of interactive graphical interfaces connected, one for each of said independent

and separate computer systems for input and output of information to and from the corresponding one of said computer systems (*see detailed description para 2*);

c) a central computer system located at a neutral site for

- processing party preference information received from each of said independent separate computer systems (*see summary para 22*);
- maintaining each said party's preference information confidential from every other one of said parties (*see summary para 22*);
- receiving a confidential acceptable level of satisfaction for an agreement from one or more parties and their willingness for maximum possible corresponding satisfaction levels for other parties to be generated for and revealed to other parties (*see detailed description para 6*);
- using optimization with given said entered information to generate a fair distribution of maximum possible satisfaction levels for each other party for each

given said confidential acceptable level of satisfaction declared by said one or more parties (*see abstract*);

- revealing said maximum possible satisfaction levels to said other parties (*see detailed description para 3*);
- if and when each of all said other parties to the negotiation (or a subset if coalitions are allowed) accept the said maximum satisfaction level revealed to that party, using optimization techniques with said entered information to generate an equivalent package that would give at least as much satisfaction to all parties as they have declared acceptable (*see abstract*);
- revealing said equivalent package to all parties concerned; and
- declaring as a tentative agreement among two or more parties, any package that has

been accepted by each of those parties (*see abstract and summary para 3*) .

d) communication link means connecting each of said independent, separate computer systems with said central computer system (*see detailed description para 2*);

CLAIM 12. The computer-based apparatus of claim 11, wherein said central computer system is further programmed for generating an improved package from said tentative agreement that is Pareto optimal (if not already) according to said entered preferences (or changed preferences) and displaying said improved package on said one or more graphical interfaces (*see detailed description para 71*).

CLAIM 13. A computer-based apparatus for assisting at least two parties involved in a negotiation problem with any number of variables in achieving a mutually satisfactory agreement on decisions to be taken on one or more of said variables, comprising:

- a) a plurality of independent, separate computer systems, one for each of said parties, each said computer system being programmed to receive and process communication between parties and/or other information pertaining to each said party's preferences on the outcome of each variable involved in said negotiation problem, including proposals and confidential acceptance of any package (*see detailed description para 2*);
- b) a plurality of interactive graphical interfaces connected, one for each of said independent and separate computer systems for input and output of information to and from the corresponding one of said computer systems (*see detailed description para 2*);
- c) a central computer system located at a neutral site for
- processing party preference information received from each of said independent separate computer systems (*see summary para 22*);
 - maintaining each said party's preference information confidential from every other one of said parties (*see summary para 22*);
 - receiving a confidential acceptable level of satisfaction for an agreement from one or more parties (*see summary para 22*); and
 - generating an equivalent package that would give at least as much satisfaction to all parties (or a subset if coalitions are allowed) as they have declared acceptable or, if that

Art Unit: 4157

is not possible, then requiring one or more parties to reduce their declared minimum level of satisfaction before attempting again to generate said equivalent package, until successful (*see abstract and detailed description para 35*);

- when successful in said attempt, then revealing said equivalent package to all parties concerned; and
- declaring as a tentative agreement among two or more parties, any package that has been accepted by each of those parties. (*see abstract and summary para 3*)

d) communication link means connecting each of said independent, separate computer systems with said central computer system (*see detailed description para 2*);

CLAIM 14. The computer-based apparatus of claim 13, wherein said central computer system is further programmed for generating an improved package from said tentative agreement that is Pareto optimal (if not already) according to said entered preferences (or changed preferences) (*see detailed description para 71*).

CLAIM 15. A computer-based apparatus for assisting at least two parties involved in a negotiation problem with any number of variables in achieving a mutually satisfactory agreement on decisions to be taken on one or more of said variables, comprising:

- a) a plurality of independent, separate computer systems, one for each of said parties, each
- said computer system being programmed to receive and process communication

Art Unit: 4157

between

parties and/or other information pertaining to each said party's preferences on the outcome

of each variable involved in said negotiation problem, including proposals and confidential

acceptance of any package (*see detailed description para 2*) ;

b) a plurality of interactive graphical interfaces connected, one for each of said independent

and separate computer systems for input and output of information to and from the corresponding one of said computer systems (*see detailed description para 2*);

c) a central computer system located at a neutral site for

- processing party preference information received from each of said independent separate computer systems (*see detailed description para 2*);

- maintaining each said party's preference information confidential from every other

- one of said parties (see detailed description para 2);

- receiving a confidential acceptable level of satisfaction for an agreement from one or more parties and, if they wish, their willingness for maximum possible corresponding

satisfaction levels for other parties to be generated for and revealed to other parties (*see detailed description para 2*);

- using optimization with given said entered information to generate a fair distribution

of maximum possible satisfaction levels for each other party for each given said confidential acceptable level of satisfaction declared by said one or more parties (*see abstract*);

- revealing said maximum possible satisfaction levels to said other parties, if so specified by the said one or more parties (*see abstract*);

- generating an equivalent package that would give at least as much satisfaction to all

parties (or a subset if coalitions are allowed) as they have declared acceptable or, if

that is not possible, then requiring one or more parties to reduce their declared minimum level of satisfaction before attempting again to generate said equivalent package, until successful (*see abstract and detailed description para 35*);

- if and when each of all said other parties to the negotiation (or a subset if coalitions

are allowed) accept any said maximum satisfaction level revealed to that party, using

optimization techniques with said entered information to generate an equivalent

Art Unit: 4157

package that would give at least as much satisfaction to all parties as they have declared acceptable (see abstract);

- revealing any said equivalent package to all parties concerned; and

- declaring as a tentative agreement among two or more parties, any package that has

been accepted by each of those parties (*see abstract and summary para 3*).

d) communication link means connecting each of said independent, separate computer systems

with said central computer system (*see detailed description para 2*) ;

CLAIM 16. The computer-based apparatus of claim 15, wherein said central computer system is further programmed for generating an improved package from said tentative agreement that is Pareto optimal (if not already) according to said entered preferences (or changed preferences). (*see detailed description para 71*)

7. **CLAIMS 17-18** are rejected under 35 U.S.C. 102(b) as being anticipated by (Publication: Beyond Win-Win in Cyberspace

www.smartsettle.com/more/beyond/BeyondWinWin.htm.) (*hereinafter "Beyond Win-Win"*).

Beyond Win-Win discloses the following as claimed:

CLAIM 17. A computer-based method for assisting at least two parties involved in a negotiation problem with any number of variables toward achieving an optimal, mutually satisfactory agreement on decisions to be taken on one or more of said variables comprising the steps of (*Section I*):

a) providing a plurality of independent, separate computer systems, one for each of said parties, each said independent, separate computer system being programmed to receive and process information pertaining to each of said party's preferences on the outcome of each said variable involved in said conflict (*Section IV*);

b) providing a central computer system located at a neutral site and a plurality of communication links connecting each of said independent, separate computer systems to said central computer system, said central computer system being programmed to

- receive preference information from each of said independent, separate computer systems;
- not reveal any party's confidential information to other parties, and
- generate at least one package representing a potential solution to the negotiation

Art Unit: 4157

problem in response to entered preference information from each of said independent, separate computer systems (*Section IV B*);

c) parties cooperating in creating a shared model of the negotiation problem and entering that information into one or more of their independent, separate computer systems (*Section IV A*);

d) each party entering into their corresponding independent, separate computer systems,

- any information required to define their private portion of the negotiation problem model (*Section VI second A*);

- any number of packages, which said packages may be private or not, and accepted or not; and/or

- any other information to be communicated to other parties (*see Section VI second A*);

e) each party entering into their corresponding independent, separate computer systems,

preference information including

- bargaining range information;

- satisfaction function information;
- information defining tradeoffs between variables;
- an optional acceptable level of satisfaction for an agreement for which optimal ratings are to be generated for other parties;
- an optional lower acceptable level of satisfaction for an agreement for which equivalent packages that would give at least that much satisfaction to each party are to be generated if possible; and/or
- any other information from which such said preference information may be derived (*Examiner will treat the and/or as if only one element is required therefore see Section VI second A*);

f) transmitting said information from each of said independent, separate computer systems to
said central computer system (*see Section II B*);

g) said central computer system processing said transmitted preference information
from all
parties; including

- generation of said optimal ratings; and
- generation of said equivalent packages (*see Section VI second A and VIII C*);

h) transmitting any said optimal ratings and said generated packages and any other
said

information to be communicated to other parties from the said central computer system
to the

appropriate said independent, separate computer systems (*see Section VI second A*);

i) each party responding to said transmitted information by

- changing said preference information;
- creating new packages;
- accepting any number of packages; and/or
- accepting any said optimal ratings derived (*Examiner will treat the and/or as if only one element is required therefore see Section VI second A*);

j) transmitting said response from each of said independent, separate computer
systems to

said central computer system (*see Section II B*);

k) said central computer system declaring a tentative agreement if two or more parties
have

accepted the same package and transmitting that information to the appropriate said
independent,

separate computer systems (*see Section VI second A*); and

l) repeating any of the above steps any number of times.

CLAIM 18. The computer-based method of claim 17, further including the steps of

a) if two or more parties involved in said negotiation problem have both accepted any
said

Art Unit: 4157

package, then at the option of the parties, causing said central computer system to generate

an improved package that is Pareto optimal (if not already) according to said entered preference information (or changed preference information) (*See Section X*); and

b) repeating the above step any number of times;

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **CLAIMS 4-5, 9-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiessen et al. (US) in view of *Preist et al, 20020120588* (*hereinafter "Preist"*).

As per CLAIMS 4-5, and 9-10, Thiessen discloses the elements of the base claims of dependent claims 4-5 and 9-10. However, Thiessen fails to explicitly disclose the automated process not requiring a graphical interface discussed in each of the dependent claims.

Preist discloses a method of entering information into a negotiation system that doesn't explicitly require an graphical interface and "is also suited to automatic, computer controlled negotiations". (*see detailed description para. 38*)

Therefore, from the teaching of Preist, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the negotiation system of Thiessen to include an automated system not requiring a graphical interface as taught by Priest.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEWANA SKINNER whose telephone number is (571)270-7141. The examiner can normally be reached on Monday-Friday 8:00am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571)272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4157

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SHEWANA SKINNER, J.D./

Examiner, Art Unit 4154

/Vu Le/

Supervisory Patent Examiner, Art Unit 4154